

March 11, 2003

Mr. J. A. Stall
Senior Vice President, Nuclear and
Chief Nuclear Officer
Florida Power and Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: ERRATA TO LICENSE RENEWAL SAFETY EVALUATION REPORT WITH
OPEN ITEM FOR ST. LUCIE, UNITS 1 AND 2 (TAC NOS. MB3406 AND
MB3412)

Dear Mr. Stall:

By a letter dated November 29, 2001, Florida Power and Light Company (FPL) submitted an application to the U.S. Nuclear Regulatory Commission (NRC) for renewal of the St. Lucie, Units 1 and 2, operating licenses for up to an additional 20 years. On February 7, 2003, the NRC staff issued its safety evaluation report (SER) with open items to document the findings of the safety review of the license renewal application (LRA) and supporting documentation for St. Lucie, Units 1 and 2.

In Section 2.3.3.7, "Fuel Pool Cooling," of the SER with open items, the staff documented its evaluation of the scoping and screening results for the spent fuel pool cooling system. On the basis of questions from your staff, the NRC staff determined that it had not provided appropriate justification for its conclusion regarding the fuel pool cooling system components subject to an aging management review. Therefore, SER pages 2-66 and 2-67 were revised to clarify the staff's evaluation. The revised evaluation also identifies a confirmatory item for FPL to revise its supplemental response to a request for additional information, and an open item concerning on-site inspection results in a report that has yet to be issued. The staff has already received a draft of the revised supplemental response.

In Section 2.4.2.5, "Emergency Diesel Generator Buildings," of the SER with open items, the staff revised its evaluation to identify an open item concerning on-site inspection results in a report that has yet to be issued. Therefore, SER page 2-133 was revised to clarify the staff's evaluation.

During the printing of the SER with open items, page 3-194 was unintentionally left blank. Therefore, SER page 3-194 is provided as a replacement for the blank page.

This letter transmits the revised pages 2-66, 2-67, 2-133, and 3-194, which should be inserted into the SER with open items to replace the existing pages. No further action is required on your part as a result of this letter.

J. A. Stall

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If you have any questions regarding this matter, please contact me at 301-415-1154.

Sincerely,

/RA/

Noel Dudley, Senior Project Manager
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos.: 50-335, 50-389

Enclosure: As stated

cc w/encl: See next page

J. A. Stall

- 2 -

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cc w/encl: See next page

DISTRIBUTION:

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1. Letter to J. A. Stall from N Dudley
2. Revised pages 2-66, 2-67, 2-133, and 3-194 for the SER with open items related to the St. Lucie, Units 1 and 2, license renewal application

Accession no.: ML030710193

OGC was notified of the errata.

Document Name: C:\ORPCheckout\FileNET\ML030710193.wpd

* See previous concurrence

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Florida Power and Light Company

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Enclosure

tanks, both UFSARs for Units 1 and 2 describe the intake cooling water source of makeup water as a seismic Category I backup supply of spent fuel pool makeup water.

After reviewing the applicant's response, the staff consulted the NRC correspondence archive to clarify the basis for conclusions presented in the original SER and SER supplements. On June 7, 1974, Mr. Robert Uhrig, Vice President of FPL, submitted a response to NRC questions entitled, "Amendment 26 to the Final Safety Analysis Report." In question 9.6, the NRC stated that the non-seismic Category I classification of those portions of the fuel pool system which perform the cooling function is unacceptable. In response, FPL committed to provide a siamese connection on each intake cooling water header in the component cooling water heat exchanger area, a standpipe on the fuel handling building will be provided from grade to the operating deck elevation, and siamese connections will be provided at both ends of the standpipe. The FPL response concluded, "Thus, via [sic] firehose, the fuel pool makeup can be readily supplied by the intake cooling water pumps. The head provided by these pumps is sufficient."

The applicant's 1974 addition of the seismically-qualified, temporary connections to the (salt water) intake cooling water system as a makeup source responded to the concern that the cooling system for Unit 1 was not seismically qualified. However, as discussed in the SERs and UFSARs for Units 1 and 2, the availability of diverse fresh water sources make the use of this salt-water source unlikely. Although the current licensing basis (as defined in 10 CFR 54.3) for St. Lucie Units 1 and 2, includes the fresh water sources, the staff found that the makeup water source from intake cooling water alone satisfied the more restrictive criteria of 10 CFR 54.4(a) for inclusion within the scope of the license renewal review. Therefore, the staff concluded that the scope of license renewal reflected on the license renewal boundary drawings is adequate.

During a telephone call on February 3, 2003, the applicant agreed to resubmit its October 3, 2002 response to RAI 2.3.3-4. At the request of the staff, the applicant agreed to remove the paragraphs that contained the applicant's assessment of the plant design and to state that the intake cooling water makeup to the spent fuel pool meets the scoping requirement of 10 CFR 54.4. This is Confirmatory Item 2.3.3.7-1.

The staff concluded an on-site inspection, which included verifying the material condition of the intake cooling water makeup system for the spent fuel pools. The applicant had identified weaknesses associated with the system and had entered the weaknesses in its corrective action program. The inspection was completed on January 31, 2003, and a report documenting the inspection findings is pending. The staff's review of the inspection findings is open item 3.0.2.2-1.

The staff compared the components listed in Table 2.3.3-7 of the LRA to those highlighted in the drawings, and found them consistent with the components highlighted in the license renewal boundary drawings. Pending completion of open item 3.0.2.2-1, the staff review found that the components of the fuel pool cooling system that have an intended function meeting the criteria of 10 CFR 54.4(a) have been identified as being within the scope of license renewal, and are subject to an aging management review in accordance with 10 CFR 54.21(a)(1). The staff did not identify any omissions.

2.3.3.7.3 Conclusions

Pending the completion of open item 3.0.2.2-1 and confirmatory item 2.3.3.7-1, and on the basis of the review of the LRA, the UFSARs, associated SERs, and the applicant's responses to RAIs, the staff concludes that there is reasonable assurance that the applicant has appropriately identified the fuel pool cooling system components subject to an AMR in accordance with the requirements in 10 CFR 54.32(a)(1).

2.3.3.8 Instrument Air

In Section 2.3.3.8 of the LRA, the applicant identifies the components of the instrument air system that are within the scope of license renewal and subject to an AMR. This system is further described in Section 9.3.1 of the UFSARs for both St. Lucie Units 1 and 2.

2.3.3.8.1 Technical Information in the Application

The instrument air system has the intended function of providing a reliable source of dry, oil-free air for I&C and pneumatic valves. Instrument air provides motive power and control air to safety-related and non-safety-related components. Only a limited number of components in the scope of license renewal require instrument air to perform their intended function. Therefore, only those portions of the system that are in the main flow path from the instrument air compressors to the applicable components are designated as within the scope of license renewal.

The applicant states that some of the license renewal boundaries of the instrument air system were established at normally open valves. The following reasons explain why the applicant considers this approach acceptable for the instrument air system.

- Instrument air supplies air to many active components required for normal plant operation, and loss or reduction of air pressure due to degraded conditions is detected early.
- Instrument air is predominantly constructed of galvanized carbon steel and bronze with an internal environment of dry air, making it very resistant to general corrosion.
- The limited number of valves that rely on instrument air are only required for maintaining hot standby conditions for SBO events, or achieving cold shutdown during and following design basis fires. Both of these situations would permit ample time for manual isolation of portions of instrument air not within the scope of license renewal, if required.

Instrument air is in the scope of license renewal because it contains structures or systems that are:

- safety-related and are relied upon to remain functional during and following DBEs
- non-safety-related whose failure could prevent satisfactory accomplishment of the intended function of safety-related structures or systems

emergency diesel generator building floor drains do not perform an intended function that satisfies the scoping criteria of 10 CFR 54.4(a).

During the AMR inspection, the inspection team verified the openings under the doors in the Unit 2 emergency diesel generator building. The inspectors questioned the size of the openings, and the applicant initiated activities to ensure the door clearances remain greater than the openings assumed in the emergency diesel generator building area drain evaluation. The inspection was completed on January 31, 2003, and a report documenting the inspection findings is pending. The staff's review of the inspection findings is open item 3.0.2.2-1.

With the exception of open item 3.0.2.2-1, the staff's review finds that the SCs of the emergency diesel generator buildings that have intended functions meeting the criteria of 10 CFR 54.4(a) have been identified as being within the scope of license renewal, and subject to an AMR in accordance with 10 CFR 54.21(a)(1). The staff did not identify any omissions.

2.4.2.5.3 Conclusions

On the basis of this review, with the exception of open item 3.0.2.2-1, the staff concludes that there is reasonable assurance that the applicant has appropriately identified the SCs of the emergency diesel generator buildings that are subject to an AMR, as required by 10 CFR 54.21(a)(1).

2.4.2.6 Fire Rated Assemblies

In Section 2.4.2.6 of the LRA, the applicant identifies the SCs of the fire rated assemblies that are within the scope of license renewal and subject to an AMR. The fire rated assemblies are described in Appendix 9.5A and Sections 3.11 through 3.14 of the St. Lucie UFSARs for both units.

2.4.2.6.1 Technical Information in the Application

Fire rated assemblies are required as part of the plant's FP program in accordance with 10 CFR 50.48. Fire rated assemblies at St. Lucie Units 1 and 2 include fire barriers, fire doors, fire dampers, and penetration seals.

In Section 2.4.2.6 of the LRA, the applicant discusses the need for fire barriers to retard the spread of fire and states that fire-resistant panels (e.g., Thermo-lag, sheet metal/ceramic fiber) mounted on steel framing are used as fire barriers. Section 2.4.2.6 further references Table 3.5-8 of the LRA and Appendix 9.5A of the Unit 1 and 2 UFSARs, which state that barriers (e.g., wall, floors, ceiling) divide the plant into fire areas. In Table 3.5-8 of the LRA, the applicant notes that concrete and steel structural components that serve as fire barriers are addressed with each structure.

The applicant listed the fire rated assemblies SCs requiring an AMR in Table 3.5-8 as: conduit caps, fire wrap (conduit and steel supports), conduit plugs, miscellaneous barriers (Thermo-lag panels, wrap, sprays, or troweled, ceramic and steel panels), fire doors (Appendix R barriers, airtight and watertight), flame impingement shields, fire sealed isolation joint, mechanical penetrations, cable tray penetrations. The intended functions of these SCs is listed as: pressure boundary, fire barrier, and flood protection barrier.

2.4.2.6.2 Staff Evaluation

that this position is consistent with that accepted by the NRC as part of the Turkey Point Units 3 and 4 LRA review.

On the basis of its review, the staff finds the applicant's response reasonable and adequate because the information provided by the applicant included the distance of the systems to borated water sources and identified the type of material used for manufacturing the bolts as low alloy steel ASTM A193, Grade B7. In addition, the industry and St. Lucie plant-specific operating experience demonstrated that loss of material and cracking are not the applicable aging effects for closure bolting.

3.3.17.2 Boric Acid Corrosion

By letter dated July 1, 2002, the staff requested, in RAI 3.3-2, the applicant clarify whether the following components are likely to be externally exposed to borated coolant leaking any adjacent systems or components:

- CCW system carbon steel surge tanks, pump bodies, and heat exchanger shells
- demineralized makeup water system (any component)
- instrument air system carbon and galvanized steel components, such as instrument air receivers, bolting, dryers, and compressor cooler shells
- ICW system carbon steel basket strainers and valve bodies
- turbine cooling water (Unit 1 only) system carbon steel components

In its response dated September 26, 2002, the applicant stated that the following components are not in proximity to any systems which contain borated water and therefore are not exposed to borated water leaking from any adjacent systems or components:

- CCW carbon steel surge tanks, pump bodies, and heat exchanger shells
- instrument air receivers, bolting, dryers, and compressor cooler shells and associated components
- ICW carbon steel basket strainers and valve bodies
- turbine cooling water carbon steel components

Some instrument air components may be exposed to borated water leakage from adjacent systems or components LRA Table 3.3-8, pages 3.3-56, 3.3-57, and 3.3-58.

Loss of material due to boric acid corrosion of instrument air carbon steel components exposed to borated water leaks is managed by the Boric Acid Wastage Surveillance Program.

The applicant further stated that demineralized makeup water components are stainless steel and thus not susceptible to boric acid wastage. The demineralized makeup water bolting in the scope of license renewal is not in proximity to any systems that contain borated water and therefore cannot be exposed to borated water leaking from any adjacent systems or components.

On the basis of its review, the staff finds the applicant's response reasonable and adequate because the information provided by the applicant clarifies that these components are not exposed to boric acid leaking and, therefore, boric acid corrosion is not an applicable aging effect.